A reservoir of experience
A flow of potential
During each of its 25 years, the National Hydropower Association has faced new challenges.

What’s different about today’s challenges is that they are being faced in an environment where energy has risen to a new level of national importance.

Moreover, concerns over climate change and carbon emissions have reached a fever pitch, and policymakers are seeking to develop and implement a national strategy.

In this milieu, clean, renewable, affordable sources of energy are greatly desired, and hydropower faces very special opportunities for enlarged roles.

In order to capitalize on present opportunities, it’s been essential that we refit and refocus the NHA — and that’s a task in which the NHA Board and I have been engaged over the past year.

As an organization, we are now better prepared to represent hydropower’s interests, act on opportunities, and address challenges.

Members have stepped forward with the necessary financial support, enabling us to field the staff and consultant efforts that are needed to pursue our goals.

Among the past year’s accomplishments:

- As a part of a larger renewable energy industry, we’ve achieved needed incentives, including extension of production tax credits that benefit hydro;
- We succeeded in securing funding that re-established a federal waterpower research and development program within the Department of Energy; and
- We participated with federal agencies toward establishing a solid platform for developing and implementing new waterpower technologies.

These and other accomplishments are but a few successes within a larger strategy that we must pursue to preserve, restore, and expand our nation’s vital waterpower resources.

I am grateful for my opportunity to serve hydropower’s interests as the NHA’s president. I encourage you to participate as we continue to strengthen hydropower’s contributions to our nation’s supplies of energy.

Leslie Eden
President, 2007-2008
The 125th anniversary of the opening of the world’s first hydroelectric plant gives NHA an occasion to pause and consider all that the industry has accomplished, as well as the many goals that still lie ahead.

As you’ll see in our 2007 annual report, *A reservoir of achievement, a flow of potential*, we continue to build on our industry’s legacy of accomplishment to prepare for a future filled with new technologies, new opportunities, and new priorities.

For NHA, this meant focusing our work on several key areas:

- **Advocating for policies that support national priorities** — We continue to press for key legislation — such as tax incentives and research and development funding — that embraces the energy, environmental, and economic benefits the hydroelectric industry offers. We’re also engaged with the ongoing effort to craft a national strategy to address climate change issues, where we believe hydropower must play a leading role.

- **Securing hydropower’s contribution to America’s energy mix** — Our 125-year record of service demonstrates the industry’s commitment to providing consumers clean, affordable energy. But NHA understands that we must build on this record. We continue to work with regulators and other officials to incorporate new technologies and new opportunities into the energy mix in order to maintain hydropower’s contributions, including its support for bringing other renewables onto the grid.

- **Speaking for an industry that serves the public** — NHA represents the U.S. hydropower industry in venues ranging from the U.S. Supreme Court to hometown newspapers. We believe that our members have an important story to tell. The more policymakers — and the general public — understand that our priorities and goals align with our nation’s priorities, the more effectively we can advocate for the industry.

NHA marked many victories this year — from educating lawmakers about the importance of our priorities to supporting regulatory programs that help our members operate — but we still have much to accomplish. We are already on the road to achieving even more in 2008, and, with your help, we will continue in our success.

Linda Church Ciocci
Executive Director
On September 30, 1882, exactly 24 days after Thomas Alva Edison switched on the steam dynamo at his Pearl Street Station in New York, manufacturer H.F. Rogers set the turbines in motion at the world’s first hydroelectric generating plant at Fox River, in Appleton, Wisconsin.

Word that technologies as new as Edison’s “Jumbos” — or as ancient as those that harness the power of moving water — could illuminate a glass bulb, heat a home, or propel a train transfixed the public and sent Wall Street scurrying to invest in the research and development that would bring these modern miracles to everyone.

For the last 125 years, the United States hydropower industry has been meeting — and exceeding — that early promise, providing clean, reliable electric generation for homes and businesses across the country. The industry has grown from a local resource for nearby towns and factories to an affordable baseload generation source that has powered the burgeoning cities of the West, electrified the rural South, and continues to serve homes and businesses throughout the United States.

Today, hydropower technologies generate about 8 percent of all electricity used in the United States. Hydropower is the country’s unparalleled renewable energy leader, generating three times more electricity than all other renewable-energy resources combined.

Far from being a relic of another century, today’s hydropower industry is recapturing the spirit and excitement of that earlier time. Inventors are bringing new technologies to market that harness power from rivers, streams, oceans, and tides. Developers are finding ways to improve efficiencies at long-established sites. Investors — still as quick to spot a revolution as they were in 1882 — are taking a keen interest in new hydropower technologies and sites that will meet our 21st century power demands, while serving our timeless environmental imperatives.

Hydropower also has the growth potential of a young industry. The Electric Power Research Institute (EPRI) released a report in 2007 identifying some 95,000 megawatts of potential hydropower capacity in the United States. That suggests the industry could grow by almost 120 percent, more than doubling its existing 80,000-megawatt capacity.

At the National Hydropower Association, our job is to ensure that the hydroelectric industry has the policies, tools, and support it needs to continue to build on its historic legacy and turn this extraordinary potential into reality. This is the story of how we’re making that happen.
Advocating for policies that support national priorities

NHA members range from small businesses trying to introduce new products and services to their communities to Fortune 500 corporations whose interests circle the globe. But as part of the U.S. hydropower industry, they share common goals when it comes to supporting sound energy policy, protecting the environment, and fostering economic opportunities for all Americans.

At NHA, we advocate for our members’ shared vision, working to ensure that national policies reflect the hydropower industry’s values. Our top priorities for 2007 included securing tax incentives that encourage hydropower development and participating in work that addresses global climate change.

**Incentives for energy, environmental, and economic development**

Hydropower projects — from applications that improve efficiencies at existing projects to new hydropower facilities that draw energy from moving water — offer benefits that go far beyond simply generating electricity. New hydropower facilities create manufacturing and construction jobs, attract investments in local communities, and foster environmentally friendly energy resources. But the developers and investors who drive these projects must have a stable long-term financial environment to make them happen.

NHA continues to lobby for policies, including production tax credits (PTC) and clean renewable energy bonds (CREBs), that provide the incentives our industry needs to grow. NHA members tell us that having these provisions in place has a direct and swift effect on

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*PHOTO TRACY HEGGINS, COURTESY OF MISSISSIPPI POWER CORPORATE COMMUNICATIONS*

*NHA members support the environment through programs such as Southern Company’s OSAW award-winning Renew Our Rivers effort.*
their development plans —
they attribute as much as
20 percent of the growth in
their development work to
having these tax measures
in the Energy Policy Act
of 2005 (EPAct).

This work is having an
immediate impact: Projects
certified for product tax
credits since 2005 have cre-
ated an additional 230,908
megawatt-hours of electric-
ity, offsetting approximately
180,000 metric tons of
carbon-dioxide emissions
annually.

Throughout 2007, NHA
made steady progress in
reaching out to Capitol
Hill to educate lawmakers
on the multiplier effects
that including hydropower
in a long-term renewable
energy tax incentive mea-
sure will have. Congress-
ional leaders heard our
message and offered sev-
eral bipartisan packages to
extend the PTC and CREBs,
only to see their efforts
frustrated as policy fights
on other issues scuttled
legislation.

NHA members continue
to make it clear that they
must have these provisions
to expand their work. We
will continue the fight to
put long-term renewable
energy tax measures in
place — not only will they
support our industry, but
they’ll also support our

NHA 2007 Congressional Activities

February Response to Rep. Bart Gordon (D-TN), chair of the
House Science and Technology Committee, on a GAO report
titled, “Key Challenges Remain for Developing and Deploying
Advanced Energy Technologies to Meet Future Needs.”

Spring Submitted statements to both the House and Senate
Appropriations Committees requesting $22 million in funding
for the DOE R&D program for hydropower and ocean, tidal,
and in-stream hydrokinetic technologies.

March Response to House Energy and Commerce Committee
request for comments on potential climate change policy.

April Organized Hill meetings for NHA members to spread
hydro’s message on key legislative issues, such as the
renewable energy tax package, climate change, and R&D
appropriations.

June Response to House Energy and Commerce Committee
request for comments on potential renewable portfolio
standards.

June 6 Testified before Senate Energy and Natural Resources
Committee at a hearing on impacts of climate change on water
supply and availability in the United States. (Grant County PUD
General Manager Tim Culbertson testified for NHA.)

June 8 Held Congressional briefing in conjunction with
the Environmental and Energy Study Institute on the role of
advanced hydropower and ocean energy in upcoming energy
legislation. Presenters included NHA staff, EPRI, and member
companies.

June 14 Developed, organized, and participated in the
10th Annual Renewable Energy and Energy Efficiency Expo
and Forum, presented by the House and Senate Renewable
Energy & Energy Efficiency Caucuses, in cooperation with the
Sustainable Energy Coalition.

October 30 Organized and signed on renewable industry
letters to the President and House and Senate Majority and
Minority Leaders requesting that renewable energy tax
legislation be enacted to extend the PTC and the CREBs
program.
national economic, environmental, and energy priorities.

**Measures that address global climate change today**

Few issues have the potential for affecting all parts of our society that global climate change does. How society will respond to the implications of a potentially carbon-constrained future remains unclear.

What is clear is hydropower’s significance to any effective climate-change program.

As NHA testified before Congress at hearings throughout 2007, hydropower is the country’s most environmentally-friendly baseload generation resource, providing electricity without the pollution associated with fossil fuels and combustion technologies. Hydropower technologies also facilitate integrating other renewable resources into the electric grid by helping utilities fill the peaks and valleys created by intermittent generators, such as wind and solar. Ensuring that society continues to have climate-friendly hydropower resources in our energy mix is critical for the future.

Global warming also could have a far-reaching impact on the hydropower industry by altering the country’s water supply and flows, reducing the seasonal snowpack that feeds rivers and aquifers, and changing national water use. Regions that traditionally have supported robust hydropower systems could see drier climates, while other parts of the country may offer new potential for hydroelectric generation. Policymakers — and the industry — need to understand how these changes could affect us.

NHA believes these issues demand that the hydropower industry play a prominent role in forging climate-change policy. NHA officials will continue to work with Congressional leaders on measures, such as the Warner-Lieberman Climate bill, that shape the country’s climate policy.

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*Employing advanced technology helps the industry ensure reliable and affordable electricity for communities.*
As the least-polluting base-load generation resource used in the United States today, hydropower is a critical part of our energy mix. Not only will society continue to rely on the electricity it provides, but utilities around the country will turn more and more to hydropower’s flexibility as a load-management tool as they bring intermittent resources onto the grid.

Ensuring that both existing conventional hydropower and new hydropower technologies remain viable, accessible energy resources is one of NHA’s highest priorities. Although securing the future of the hydropower industry permeates all facets of our work, nowhere is it more important than in regulatory and research issues.

**Regulation**

Hydropower facilities in the United States come under intense regulatory scrutiny from the earliest stages of development to the end of their operational lives.

Regulators consider every project’s impact on land use, the watershed, historic and tribal sites, recreational facilities, and other energy-supply needs.

NHA works closely with the Federal Energy Regulatory Commission (FERC) and other federal, state, and local agencies to create an appropriate framework for assessing our industry’s facilities, while ensuring that consumers will continue to benefit from hydropower generation. This work takes us into many different areas.

As new hydropower technologies emerge with designs, sites, and implications far different from existing conventional hydroelectric dams, even determining which regulatory entity should assess a particular project can become a confusing and duplicative process. For several years, NHA has worked with both FERC and the U.S. Department of the Interior’s Minerals Management Service (MMS) to resolve jurisdictional issues between the two agencies over licensing projects on the Outer Continental Shelf. Through comments on proposed rulemakings, participation in regional outreach events, and discussions with regulators and policymakers, NHA has represented the hydropower industry’s interests as the agencies negotiate their roles.

NHA has also worked with FERC to create a permit pro-
cess for new hydrokinetic technologies. In comments on proposed rulemakings, participation in special workshops, and discussions with FERC staff, NHA has advocated a preliminary permit approach that ensures fairness and competition, while also allowing developers to assess technical and environmental issues with their technologies in the water. FERC also proposed a pilot-project licensing process that would encourage this work, allowing developers to sell power generated by the pilot projects to the grid and providing a revenue stream to support development.

NHA will continue to work with regulators and other agencies that assess and oversee hydropower interests to ensure that our members have the fair, responsive, appropriate framework they need to serve the public.

**Technology development**

In addition to advocating for regulatory procedures that facilitate the introduction of new hydropower technologies, NHA also pursues federal support for waterpower research, development, demonstration, and deployment programs. This support is particularly important for encouraging the ocean, tidal, and in-stream hydrokinetic technologies that will play an important role in our future energy mix.

EPRI’s 2007 report on hydropower potential in the United States underscores just how much support for hydropower R&D is: With an investment of $54 million annually between now and 2015, the hydropower industry is poised to add an additional 23,000 megawatts of capacity by 2025. That’s the equivalent of more than a dozen large coal or nuclear power plants — for a fraction of the cost and without the associated pollution and waste disposal issues.

One the industry’s ongoing frustrations about R&D is the federal government’s failure to fund the U.S. Department of Energy’s (DOE) hydropower program, despite Congressional appropriations directing resources for this effort. DOE eliminated spending on hydropower technologies of any kind in 2005, capping a three-decade slide in federal funding.

Experts believe that this trend has a chilling effect on the future of our industry: the Government Accountability Office found in 2006 that this shrinking federal support is not sufficient to foster the development and deploy-

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**Major NHA Filings and Petitions in 2007**

**January, DOE:** Comments to DOE on its audit of the FERC dam safety program

**February, FERC:** Comments on Wave, Current, and Instream Technologies Projects

**March, MMS:** Comments on Alternative Energy and Alternative Use EIS

**June, FERC:** Comments on proposed changes to Chapter 6 of its engineering guidelines on emergency action plans

**October, FERC:** Comments before the Hydrokinetic Technologies Pilot Project Workshop

**November, FERC:** Comments on Hydrokinetic Project Conditioned Licenses
ment of new hydropower technologies. NHA agrees with this view, and we’re working hard to change the situation.

NHA has lobbied to restore federal R&D funding for hydropower, and we’ve found solid support in Congress for our industry. In June 2007, the House Appropriations Committee approved $22 million in funding for conventional, ocean, tidal, and in-stream hydro projects, agreeing to the full amount of NHA’s funding recommendations. As various pieces of legislation moved through Congress in this tumultuous political year, NHA was able to retain many of the key initiatives we advocated, ultimately securing a $10 million appropriation for the DOE program — a great achievement considering the federal government’s current fiscal constraints.

NHA continues to work with Congressional leaders, DOE officials, and members of the administration to increase funding for hydropower R&D, which will support the industry’s efforts to develop new energy resources and meet our national energy, environmental, and economic goals.

Hydropower is America’s largest renewable resource. Technology improvements, such as this generator upgrade in New York, help the industry maintain and increase its clean electricity output.
Advocating for the hydropower industry’s interests before Congress and key agencies is not the only way NHA provides a voice for its members. We also contribute to discussions in the courts, in dialogues with other organizations, and in the media.

NHA also speaks for the U.S. hydropower industry in work with other trade associations and allied groups in the energy industry. Throughout 2007 and into 2008, we’ve formed alliances with the Renewable Energy Business Alliance, the American Wind Energy Association, the Solar Energy Industries Association, and the Geothermal Energy Association to coordinate outreach on efforts that will secure long-term renewal of the PTC and other renewable-energy tax incentives.

NHA plans to continue working with these and other like-minded organizations as we advocate for policies that support the renewable-energy industry. We believe that resources throughout the renewable-energy sector share many common goals that make coordinated outreach work an important tool for the hydropower industry.

Through our relationship with the Canadian Hydropower Association (CHA), NHA is also looking at issues and opportunities that affect the entire North American hydropower sector. NHA and CHA held several meetings during 2007 where we discussed ways to raise hydropower’s profile as a renewable resource throughout North America and to represent North American interests even more effectively in international venues.

NHA recognizes exceptional achievement in the industry through the Outstanding Stewards of American Waters (OSAW) awards. Pictured here is former Avista official Bob Anderson taking part in the company’s OSAW award-winning program that protects threatened bull trout and Kokanee salmon.
This year, NHA also continued its participation in key industry conferences and trade shows, providing speakers, panelists, displays, and exhibits for more than a dozen major events. These events provide an opportunity for NHA to present the industry’s messages to a broader audience, while building alliances throughout the energy and environmental sector.

As the industry’s chief advocate and representative, NHA also reaches out to the media through news releases, special statements, press conferences, interviews, and in other venues. We believe that by targeting our messages to policymakers, opinion leaders, and the public as a whole, we can ensure support for hydropower technologies on a local and national level.

NHA is committed to expanding its outreach efforts wherever we find an opportunity to educate audiences about our messages and build support for the U.S. hydropower industry.

New ocean, tidal, and in-stream technologies, such as Hydro Green Energy’s hydrokinetic turbine on the Mississippi River, could help the industry add 23,000 megawatts of new capacity by 2025.
2007 Outstanding Stewards of America’s Waters (OSAW) Winners

- **Avista**
  Clark Fork Project, Lake Oreille Trout Suppression

- **Duke Energy**
  Cooperative, Basin-Wide Approach for Improving Water Management

- **New York Power Authority**
  Eel Passage Facility

- **Southern Company Generation**
  Renew Our Rivers

*For more information, visit www.outstandingwaters.org*

Key conferences NHA attended and/or organized in 2007

- American Council on Renewable Energy Policy Forum
- American Fisheries Society (meetings)
- Canadian Hydropower Association
- Energy Ocean 2007
- NHA Annual Conference
- NHA Hydraulic Power Committee fall meeting
- NHA regional meetings
- Northwest Hydroelectric Association Annual Conference
- Power-Gen Renewable Energy & Fuels Conference
- Renewables on Parade
- Roosevelt Energy Conference
- Sustainable Energy Coalition Renewable Energy Expo
- Waterpower XV
### Affiliated Organizations
- Hydro Research Foundation
- U.S. Hydropower Council

### New Members
- Alliance Energy
- American Municipal Power - Ohio, Inc.
- Apex Energy Technologies
- Black & Veatch Corporation
- CH2M Hill
- Fieldstone Energy
- Generational Energy
- Merced Irrigation District
- Northbrook Energy, LLC
- Northern California Power Agency
- Spaulding Consultants
- Steel Fab, Inc.
- Trelleborg

Technologies like this minimum gap runner at Grant County PUD’s Wanapum Project help make hydropower facilities more fish-friendly and efficient.
## Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Position</th>
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<tbody>
<tr>
<td>Eugene Allison</td>
<td>Georgia Power Company</td>
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<tr>
<td>Charles F. Alsberg*</td>
<td>North American Hydro, Inc.</td>
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<td>Janet Audunson</td>
<td>Hiscock &amp; Barclay, LLP</td>
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<td>Randy Baysinger</td>
<td>Turlock Irrigation District</td>
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<td>Tim Brush</td>
<td>Normandeau Associates</td>
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<td>Donald H. Clarke</td>
<td>Law Offices of GKRSE</td>
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<td>John Claybrook</td>
<td>Phoenix Power Controls</td>
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<td>HCI Publications, Inc.</td>
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<td>Julie Smith Galvin</td>
<td>Brookfield Renewable Power</td>
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<td>James Hancock</td>
<td>Balch &amp; Bingham LLP</td>
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<td>Portland General Electric</td>
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<td>Duke Energy</td>
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<td>George A. Martin*</td>
<td>Georgia Power Company</td>
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<td>Southern California Edison</td>
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<td>Andrew Munro</td>
<td>Grant County Public Utility District</td>
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<td>Troutman Sanders LLP</td>
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<td>Sarah Verville</td>
<td>Pierce Atwood</td>
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<td>Debbie Young</td>
<td>Tacoma Power</td>
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<td>David Youlen*</td>
<td>Brookfield Renewable Power</td>
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### Past NHA Presidents

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<th>Company/Position</th>
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<tr>
<td>George A. Martin*</td>
<td>Georgia Power Company</td>
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## Executive Committee

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<tr>
<td>President</td>
<td>Leslie Eden</td>
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<tr>
<td>Vice President</td>
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<td>Normandeau Associates</td>
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<td>Treasurer</td>
<td>Rick Miller</td>
<td>Devine Tarbell &amp; Associates</td>
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<tr>
<td>Secretary</td>
<td>Julie Keil</td>
<td>Portland General Electric</td>
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## NHA Staff

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<tr>
<td>Executive Director</td>
<td>Linda Church Ciocci</td>
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<tr>
<td>Senior Manager of Government</td>
<td>Jeffrey A. Leahey, Esq.</td>
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<tr>
<td>Legislative Assistant</td>
<td>John Rastler</td>
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<tr>
<td>Membership Coordinator</td>
<td>Diane C. Lear</td>
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<tr>
<td>Programs Assistant</td>
<td>Fade Adetosoye</td>
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<tr>
<td>Executive Assistant</td>
<td>Kimberly Costner</td>
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